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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,653	12/31/2003	Heui Bom Lee	11037-156-999	1611

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EXAMINER	
MUSSER, BARBARA J	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/750,653	LEE ET AL.	
	Examiner	Art Unit	
	Barbara J. Musser	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-10* is/are pending in the application.

4a) Of the above claim(s) *6-10* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/9/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herring, Jr. et al. in view of Levine et al.(U.S. Patent 4,303,581)

Herring, Jr. et al. discloses an inner panel(11) and an outer panel having a flange portion(13), applying a hemming sealer(17) to an interior portion of the flange portion, positioning the inner panel at the flange portion and pressing it there, and folding the flange portion so as to form a hem wherein beads within the adhesive create a gap of a predetermined clearance between the inner panel and the outer panel.(Figures 5-8; Col. 1, ll. 63-65; Col. 2, ll. 57-60) The reference does not disclose forming an electro-deposition layer in the gap between the inner and outer panel though it does show a small gap not containing adhesive between the inner and outer panel in Figure 8. Levine et al. discloses it is conventional to apply an electro-deposition layer to automotive parts to protect them from rust and corrosion though it does not disclose precisely when in the process the electro-deposition occurs.(Col. 6, ll. 20-30) It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply an electro-deposition layer to the hem between the inner and outer panel on Herring, Jr. et al. since the use of electro-deposition layers to protect against rust and

corrosion is well-known and conventional in the automotive arts as shown for example by Levine et al.(Col. 6, ll. 20-30). While Levine et al. does not disclose whether the electro-deposition occurs before or after forming of the hem, it would have been obvious to do this either before or after formation of the hem since one in the art would appreciate the electro-deposition could only occur at these times and they are obvious alternatives. As to whether the electro-deposition would occur in the gap, since Levine et al. is performing the same process as applicant, namely electro-depositing a coating layer, into the same type of structure, i.e. one with a gap between the panels, one in the art would appreciate that the same result would occur, such that the gap would have at least a partial layer of electrodeposited material. It is noted that the claim does not require the complete surface of the gap to be electro-deposited.

Regarding claim 2, since the entire adhesive contains the beads, the gap would extend along the entire edge of the outer panel having the flange portion.

Regarding claim 3 Herring, Jr. et al. discloses the beads within the adhesive are 0.076-0.7 mm thick.(Col. 3, ll. 26-27) It would have been obvious to one of ordinary skill in the art at the time the invention was made to choose any bead thickness within the range specified by the reference such as 0.4-0.6 mm since the entire range is taught by the reference.

Regarding claim 4, the beads located within the adhesive are considered to interconnect the inner and outer panels since they touch both the inner than outer panels.(Figure 7)

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Herring, Jr. et al. and Levine et al. as applied to claim 1 above, and further in view of Sweeney et al.(U.S. Patent 5,487,803).

The references cited above do not disclose a bead which mechanically interlocks the panels together during a compression step. Sweeney et al. discloses that adhesive take time to form a bond and that applying beads between the panels which mechanically interlock the panels would secure them together.(Col. 1, ll. 33-45; Col. 2, ll. 18-25) It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the beads of Sweeney et a. in the adhesive of Herring, Jr. et al. to form a mechanical interlock since this would allow the panels to be moved without waiting for the adhesive to cure(Col. 1, ll. 33-45), particularly since Sweeney et al. discloses the beads can be used in combination with an adhesive.(Col. 4, ll. 10-14)

4. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being obvious over Bissonnette(U.S. Patent 6,523,244) in view of Levine et al.

Bissonnette discloses an inner panel(12) and an outer panel having a flange portion(14), applying a hemming sealer(16) to an interior portion of the flange portion, positioning the inner panel at the flange portion and pressing it there, and folding the flange portion so as to form a hem.(Figures 1-5) The adhesive can be a double sided foam tape.(Col. 21, ll. 45) One in the art would understand that such a tape would have a predetermined thickness which would be greater than zero, thus forming a gap between the inner and outer panels which is greater than zero. The reference does not disclose forming an electro-deposition layer in the gap between the inner and outer

panel though it does show a small gap not containing adhesive between the inner and outer panel in Figure 5. Levine et al. discloses it is conventional to apply an electro-deposition layer to automotive parts to protect them from rust and corrosion though it does not disclose precisely when in the process the electro-deposition occurs.(Col. 6, ll. 20-30) It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply an electro-deposition layer to the hem between the inner and outer panel on Herring, Jr. et al. since the use of electro-deposition layers to protect against rust and corrosion is well-known and conventional in the automotive arts as shown for example by Levine et al.(Col. 6, ll. 20-30). While Levine et al. does not disclose whether the electro-deposition occurs before or after forming of the hem, it would have been obvious to do this either before or after formation of the hem since one in the art would appreciate the electro-deposition could only occur at these times and they are obvious alternatives. As to whether the electro-deposition would occur in the gap, since Levine et al. is performing the same process as applicant, namely electro-depositing a coating layer, into the same type of structure, i.e. one with a gap between the panels, one in the art would appreciate that the same result would occur, such that the gap would have at least a partial layer of electrodeposited material. It is noted that the claim does not require the complete surface of the gap to be electro-deposited.

Response to Arguments

5. Applicant's arguments filed 2/7/05 have been fully considered but they are not persuasive.

Regarding applicant's argument that examiner has not shown a reference showing that electro-deposited layers are well-known and conventional, Levine et al. shows such layers in automotive parts are well-known and conventional in the automotive arts. Since applicant has not shown how his process differs from the known prior art processes which electro-deposited layers on hemmed panels, applicant's process is considered to be the same as the known prior art processes and thus performing the same steps(electro-deposition) on the same type of seam(with a gap) would result in the same final result, namely the gap having a layer electro-deposited into it. Since the addition of this reference is a result of applicant's request for proof of the process being well-known and conventional, this rejection is made final.

Regarding applicant's argument that the rejection did not disclose applying the layer in the gap, since such layers are intended to cover the entire joint, one in the art would have understood that they would be present in the gap.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara J. Musser whose telephone number is (571) 272-1222. The examiner can normally be reached on Monday-Thursday; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571)-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BJM

SAM CHUAN YAO
PRIMARY EXAMINER